



US Army Corps
of Engineers
St. Paul District

Information Paper

Mississippi River: Lock and Dam 3 Navigation Safety and Embankments Reevaluation



Lock and Dam 3 looking west and upriver toward Prairie Island. Minnesota is on the left. Wisconsin is on the right.

Contact

Daniel B. Wilcox, Project Manager
(651) 290-5276 (651) 290-5258 fax
daniel.b.wilcox@mvp02.usace.army.mil

Location/Description

Lock and Dam 3 is a navigation dam and lock on the Mississippi River six miles upstream from Red Wing, Minn. Its position on a bend in the river makes down-bound navigation difficult, because of an outdraft current that tends to sweep towboats and barges away from the lock toward the gated part of the dam. The outdraft has resulted in many accidents and has been cause for concern for many years. A related problem with Lock and Dam 3 is maintaining the structural integrity of a set of three earthen embankments that connect the gated part of the dam to high ground on the Wisconsin side. Navigation accidents can render the dam gates inoperable, resulting in overtopping and erosion of the embankments. The three Wisconsin side embankments divide the eight-foot head at the dam into three steps and work together as part of Lock and Dam 3. Failure of the embankment system could result in accidental drawdown of Pool 3, with adverse effects on the river environment, navigation and operation of the Prairie Island nuclear power plant.

The St. Paul District proposed, and the Corps of Engineers Headquarters, approved two projects to address concerns about navigation safety and embankments. One was a ported guardwall to guide down-bound towboats into the lock. This project has not been funded. The district also recommended reconstructing the Wisconsin-side embankment, following a downstream alignment along the tailwater. Recent surveys in the tailwater identified a species-rich mussel bed, including a state-listed endangered species. In an effort to address the navigation safety and embankment concerns at Lock and Dam 3, the district is reevaluating these related problems.

Status

The St. Paul District formed an interagency Lock and Dam 3 Planning Team in April 2000. The team has set objectives, identified alternatives, and is formulating alternative plans. A Notice of Intent to Prepare an Environmental Impact Statement (EIS) was published in the Federal Register in August 2000. A public meeting was held in February 2001, jointly hosted with the Minnesota-Wisconsin Boundary Area Commission. The alternative plans for strengthening the embankments and for improving navigation safety are being evaluated and compared using a risk assessment and benefit: cost evaluation. The reevaluation study will be completed in July 2002. Pending completion of the reevaluation report and EIS, and approval from Corps Headquarters, work on plans and specifications will be conducted in 2002. Construction to strengthen the embankments and to improve navigation safety could begin in 2003.

Authority

The Upper Mississippi River Nine-Foot Channel Navigation Project was authorized as part of the Rivers and Harbors Act approved July 3, 1930.

Fiscal

The reevaluation study will cost approximately \$700,000, at 100 percent federal funding. The costs of measures to strengthen the Wisconsin side embankments and to improve navigation safety have not yet been estimated.